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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,422	12/05/2000	Dieter Busch	741124-63	6466

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EXAMINER

REIS, TRAVIS M

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 02/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/729,422

Applicant(s)

BUSCH, DIETER

Examiner

Travis M Reis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/05/00 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

12. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 2 is objected to because of the following informalities: the phrase "and measuring" should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

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published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 3-6 & 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Nower (U.S. Patent 5980094).

With reference to claims 3-6, Nower discloses a device (10) for measuring and assessing the mutual alignment of bodies, with two laser gyros (12,14), wherein the device has an ergonomically attached individual keys (32) for actuation by the thumb or forefinger which, when actuated by an operator, causes storage of an individual measured value out of a time-sequential succession of measured values (col. 4, lines 4-6); has a high-resolution display device (34) for reproduction of alphanumeric or graphic information, using which an operator can recognize whether and in what manner correction measures can be carried out on the articles to be measured (col. 1 line 51); & provided with transmission means (26, 28) for wirelessly receiving or exchanging data, commands and other information with an externally arranged control or a higher-level supervisory computer utilizing infrared light and extremely high frequency radio waves as a data carrier (cols. 1 & 4, lines 57 & 1-3) (Figure 1).

With reference to claim 11, Nower discloses the externally arranged control or higher level supervisory computer has means for acquiring averaging measured values at a selected measurement site for ascertaining the spatial orientation of bodies or the device in a time sequential manner with a measurement frequency at which current mechanical acceleration values with comparatively low intensity are represented or assume a minimum value (cols. 3 & 4, lines 49 & 4-12).

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5. Claims 2 & 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Lysen et al. (U.S. Patent 6040903).

With reference to claim 2, Lysen et al. disclose a device for measuring and assessing the mutual alignment of bodies, with at least one laser gyro (4), wherein the device has speech output means for acoustically providing determined measurement results (col. 8 lines 22-23).

With reference to claim 13, Lysen et al. disclose a process for measuring and assessing the mutual alignment of bodies, comprising the following steps: determining solid-borne sound quantities which are present in a vicinity of or directly on a stipulated measurement surface of the bodies to be measured; analyzing the solid-borne sound quantities according to periodic and nonperiodic portions; determining a frequency which is characterized by a minimum value of the periodic portions of the determined and analyzed solid-borne sound quantities, acquiring multiple, average-forming measured values for displaying of orientation indication values on one of the bodies with a repetition frequency which corresponds to that frequency at which a minimum of the periodic portions of solid-borne sound quantities has been recognized and with an integral fraction of this frequency (cols. 3-4, lines 61-7, 1-2).

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Gerard et al. (U.S. Patent 5689330).

Gerard et al. disclose a device (10) for measuring and assessing the mutual alignment of bodies, with at least one laser gyro, wherein the device has means for

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receiving and processing voice commands of an operator and switching the device into an altered machine status based on the voice commands (col. 3 line 20).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nower.

Nower discloses all of the instant claimed invention as stated above in the rejection of claims 3-7 & 11 but lacks the use of an antenna serving as a handle. Nower discloses that information is transmitted through whatever transmission means are applicable (col. 3-4 lines 61-67, 1-3). Official notice is taken with respect to the antenna since it is very well known in the art to use an antenna as transmission means. Thus, to include an antenna would have been obvious to a person having ordinary skill in the art at the time the invention was made since the device will be inoperative in the absence of some sort of transmission means and since the antenna is a commonly used type of transmission means.

The shape of an antenna, absent any criticality, is only considered to be an obvious modification of the shape of the antenna used by Nower that a person having ordinary skill at the time the invention was made would have been obvious to provide since the courts have held that a change in shape or configuration, without any

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criticality, is within the level of skill in the art as the particular shape claimed by Applicant is nothing more than one of numerous shapes that a person having ordinary skill in the art will find obvious to provide using routine experimentation based on its suitability for the intended use of the invention. See In re Dailey, 149 USPQ 47 (CCPA 1976). Furthermore, in a broad sense, any antenna could be used as a handle if so desired.

Regarding the excluded frequencies in claim 10: Nower discloses the externally arranged control or higher level supervisory computer has means for performing an averaging measured value acquisition to ascertain the spatial orientation of the bodies or the device in a time sequential manner with a measurement frequency, but does not disclose a particular value for this parameter (col. 5 lines 6-10). However, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to exclude the range from 47 to 53 Hz or from 56 Hz to 64 Hz, the range of a technical line frequency, a rotational or oscillation frequency of a machine integrated into the bodies to be measured, a frequency band which is located in the immediate vicinity of a mechanical acceleration frequency which occurs at a selected measurement site with above average intensity or which can appear there, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the "optimum range" involves only routine skill in the art. In re Aller, 105 USPQ 233.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nower in view of Gerard et al.

Nower discloses a process for measuring and assessing the mutual alignment of bodies, comprising the following steps: contacting a measurement probe with a first body which has a reference surface or edge; inputting a command by an operator to the measurement probe; contacting the measurement probe with a second body which has a measurement surface or a measurement edge; computing geometrical data which describe the mutual orientation of the bodies in a differential manner; outputting of information which has differences of orientation between the first and the second body, on an optical display basis, to an operator. Norton does not disclose a speech input means which facilitates structured input of dimension data.

Gerard et al. discloses a laser plane generator with means for receiving and processing voice commands of an operator and switching the device into an altered machine status based on the voice commands (col. 3 line 20). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the voice command means disclosed by Gerard et al. to the invention taught by Nower in order that the device can be controllable without the need of typing commands.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nower in view of Lysen et al.

Nower discloses all of the instant claimed invention as stated above in the rejection of claims 3-7 & 11 but lacks the externally arranged control containing a speech input or speech output function.

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Lysen et al. discloses a electro-optical measuring device with a speech output (col. 8 lines 22-23). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the speech output disclosed by Lysen et al. to the device disclosed by Nower in order that the device can be more ergonomic.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nower in view of Rodloff et al. (U.S. Patent 5408751)..

Nower discloses all of the instant claimed invention as stated above in the rejection of claims 3-7, 10, & 11 but lacks the value acquisitions being made in a stochastic, nonperiodic manner.

Rodloff discloses a high resolution gyro system for precise angular measurement in which values are recorded in random points in time (col. 9 line 14-5). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the means disclosed by Rodloff to the device disclosed by Nower in order that the time intervals of the measured value acquisitions are irregularly distributed to prevent value drift error.

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lysen et al. in view of Rodloff et al.

Lysen discloses all of the instant claimed invention as stated above in the rejection of claims 2 & 13 but lacks the measured values are recorded in a stochastic sequence.

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Rodloff discloses a high resolution gyro system with the teaching that values can be recorded in random points in time (col. 9 line 14-5). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the process step disclosed by Rodloff to the process disclosed by Lysen et al. in order that the time intervals of the measured value acquisitions are irregularly distributed to prevent value drift error.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Busch discloses a method and device for aligning the shaft of a rotating machine (U.S. Patent 6223102). Nower et al. discloses an alignment analyzer with graphical alignment tolerance display for in-line shafts (U.S. Patent 5526282). Stieler discloses a procedure for measuring angles and trajectories by means of gyros and inertial systems (U.S. Patent 5331578). Toga discloses a device for emitting a reference beam of a measuring instrument (JP02116708).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis M Reis whose telephone number is (703) 305-4771. The examiner can normally be reached on 8:00--5:00 Monday--Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (703) 308-3875. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Travis M Reis
Examiner
Art Unit 2859
tmr
February 20, 2002



Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800